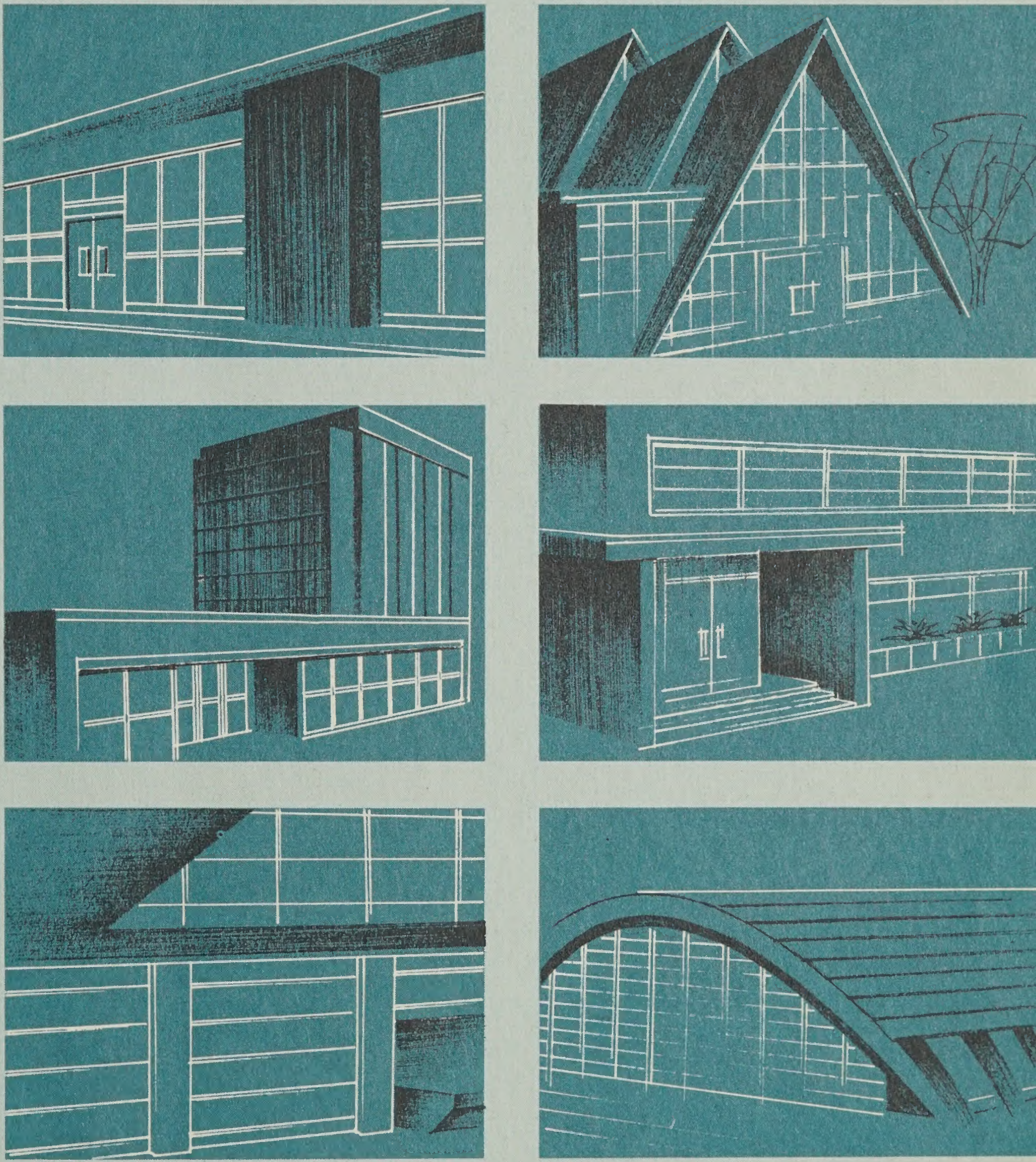
NON-COM®
FIRE-PROTECTED WOOD

Fire-Protection . . . the new role of wood



NON-COM
FIRE-PROTECTED LUMBER

A recognized fire-resistive building material that opens new possibilities in the ever-changing world of structural design.

A.I.A. File No. 19-A-3

NON-COM FIRE-PROTECTED WOOD breaks the fire barrier

NON-COM fire-protected wood—after conclusively proving its built-in resistance to spreading flames under severe testing and actual fire experience—has won the approval of insurance underwriters, government officials, building code representatives and fire marshals from coast-to-coast. NON-COM wood's break-through as a recognized fire-protected building material has shattered the ancient "fire barrier" against wood . . . providing architects, engineers and builders everywhere with a new dimension in safety, building economy and efficiency, and freedom of structural design.

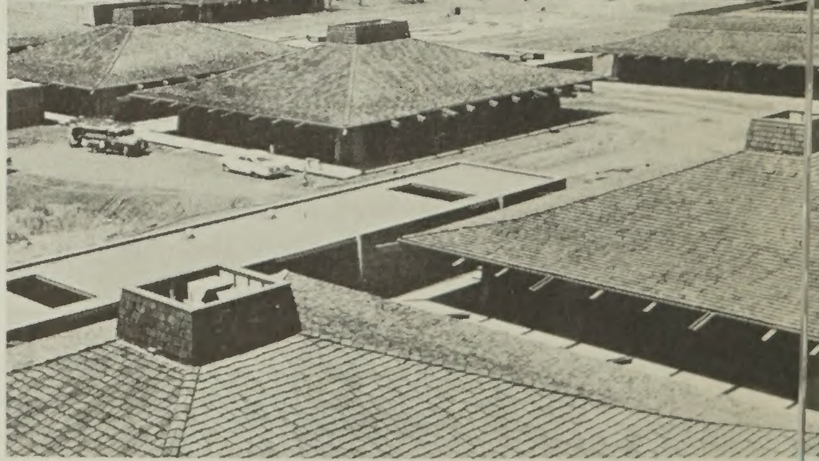
NON-COM wood is pressure-impregnated with mineral salts that react chemically at a temperature below the ignition point of wood. Instead of the flames and smoke usually associated with a conventional wood fire, these salts emit non-combustible gases and water vapor that replace flammable gases, and a dry carbon is developed rather than a tar—forming a protective, insulating char on the surface. As a result, the structural strength of the wood beneath is maintained . . . flame spread is prevented . . . smoke density is reduced . . . and, since NON-COM wood is self-extinguishing, there is no smouldering after-glow. The fire goes out automatically when the combustibles feeding it are extinguished. In addition, NON-COM wood resists decay, termites and other wood-destroying insects.

NON-COM lumber and plywood are recognized by Factory Mutual Engineering Division, Building Officials Conference of America, The National Board of Fire Underwriters plus a host of other insurance rating bureaus and most local and state building codes. NON-COM fire-protected wood has been given a Fire Hazard Classification by Underwriters' Laboratories, Inc. of 15 or less—equivalent to gypsum wall board in its resistance to flame spread, fuel contribution and smoke density.

The tested and proven fire-protective characteristics of NON-COM treated wood have led to preferential insurance rates for schools, medical centers, institutions, public buildings and commercial structures across the country.

capsule case histories on NON-COM specified fire-resistive construction

St. Paul's Parish House in Richmond, Va., has built-in safety from spreading fire with cornices, roof battens, gusset framing, sheathing of NON-COM. Architects: H. Coleman Baskerville of Baskervill and Son, Richmond, Va.



Here at Foothills Junior College in Los Altos, California, 170,000 board feet of NON-COM treated wood for purlins, joists and exterior siding in the library, lecture halls and physical education buildings provides safety from fire, termites and decay. Architects: Ernest J. Kump, Masten & Hurd & Gwathmay, Palo Alto, California.

AVERY

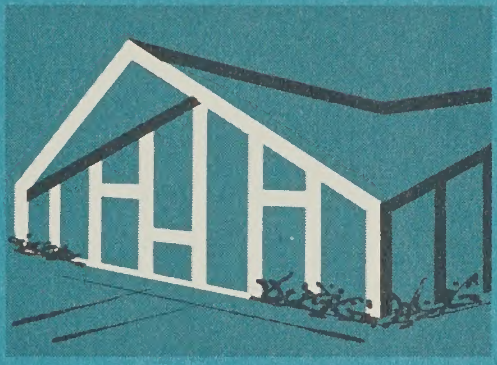
DESIGN AND CONSTRUCTION ADVANTAGES of NON-COM fire-protected products

Permanent Protection

Because chemically stable mineral salts are forced deep into the wood cells—not just on the surface as with fire-retardant paints—NON-COM products provide a lifetime of protection that never needs renewal. In addition to its proven resistance to fire, NON-COM wood resists attack by termites and decay.

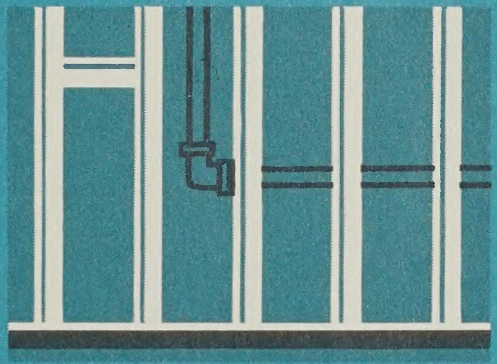
Freedom of Structural Design

Availability of a proven fire-protective lumber and plywood opens an exciting new world of structural design possibilities for the architect . . . a measure of safety, economy and construction efficiency not practical with many other non-combustible building materials.



Easy accessibility

During building, remodeling or repairing, openings can be cut quickly and economically—making it easier to install plumbing, heating and electrical systems than with certain other types of non-combustible construction materials.

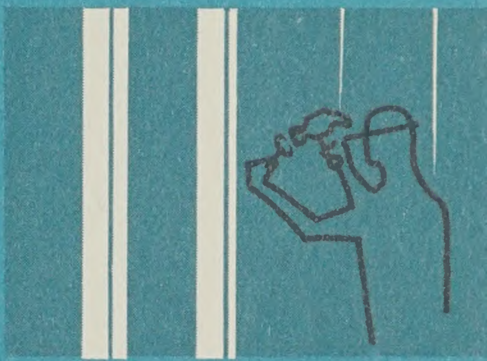


Quick, easy construction

Since wood is lightweight and easy to handle, construction time is only a fraction of that necessary for other building materials. Full construction strength is developed immediately . . . many areas—such as built-up roofs—can be laid with no delay.

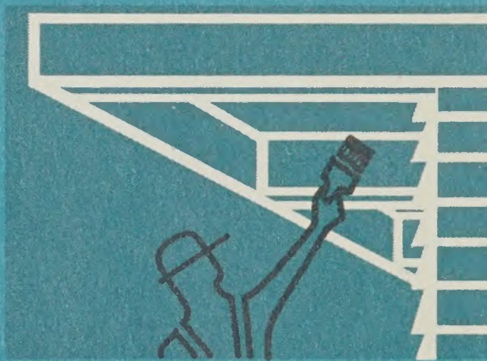
Low-cost installation

NON-COM wood can be sawed or nailed the same as untreated wood. Carpenters use ordinary tools without special accessories. Also, no form work is required for wood installation. These economical features add up to lower construction costs.

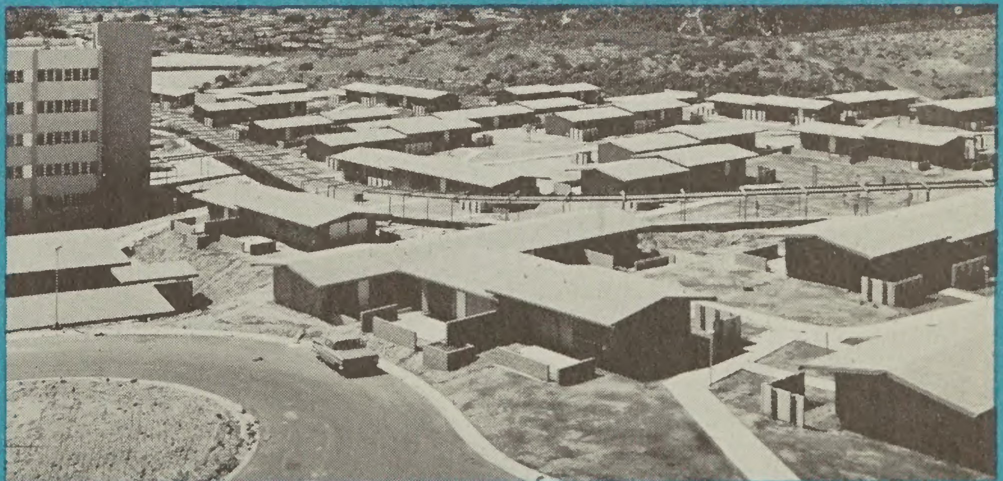


Paintable

Any good quality paint, stain or sealer can be applied to NON-COM treated wood, according to specifications. Exterior oil or resin base paints applied in accordance with manufacturers' recommendations are to be used.



NON-COM fire-protected wood for structural beams in exposed interior roof framing at Green Meadows Country Inn, near Columbus, Ohio, not only brought about lower insurance rates but added rustic beauty to this graceful lodging and recreation center. NON-COM treated wood was also used for railing and porch pillars. Architects: Gamble, Pownall & Gilroy, Fort Lauderdale, Florida.



Because NON-COM fire-protected wood was used in all beams, rafters and spacers of the $6 million Wesley Palms development in San Diego, California, retired residents of this community have positive protection against the possible disaster of spreading fire. The added margin of safety provided through the use of NON-COM treated wood also brought about preferential insurance rates. Architects: Neptune and Thomas, Pasadena, California.

SPECIFICATIONS

Southern pine, Douglas fir, West Coast hemlock, white fir and redwood lumber and Douglas fir plywood (exterior grades) shall be pressure impregnated with NON-COM fire protective chemicals to provide a fire hazard classification (flamespread and fuel contributed) of 15 or less by Underwriters' Laboratories, Inc. testing and shall be so labeled. Each piece of lumber or plywood shall be further identified with the name NON-COM and Koppers. The treatment shall, also, provide preservative chemicals to resist decay and termite attack under conditions to which fire retardant treated lumber is normally exposed.

After treatment, all 1-inch and 2-inch lumber and all thicknesses of plywood shall be dried to a maximum moisture content of 18% (a lower moisture content may be specified for clear lumber or special uses) prior to installation. Lumber thicker than 2 inches shall be surface-dried.

If NON-COM treated material is to be painted, sealed, or varnished, it shall be kiln-dried to a maximum moisture content of 12%. Before applying paint, sealers, or stain to NON-COM wood, the surfaces must be dry and clean. For architectural finish, a light sanding of the surface is required before applying the first or prime coat.

Fire-retardant treated wood is not recommended for use where it is directly exposed to weather (rain). Where it is occasionally exposed to weather (rain) or to excessive condensation (dripping), it shall be protected by application of a three-coat paint system. Exterior oil or resin base paints applied in accordance with manufacturers' recommendations are to be used.

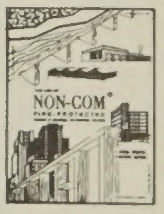
Normal on-the-job framing is permitted with no requirement for field treatment of exposed surfaces. Fire-protected wood received at the jobsite shall be elevated off the ground or the floor a minimum of 12 inches for storage. If the material is stored outdoors, it must be completely covered with a waterproof and weatherproof material.

AVAILABILITY

NON-COM treated lumber and plywood is the most widely available fire-protected wood product offered commercially. NON-COM is obtainable throughout the United States, including the states of Alaska and Hawaii, from Koppers Company plants, licensees and authorized dealers. It is also available in Canada.

INFORMATION

Get the full NON-COM wood story. Write for Bulletin W-365 that details technical data, performance tests and insurance regulations pertinent to NON-COM wood.



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KOPPERS

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